

Serial No. 10/764,290
Atty. Doc. No. 2001P10197WOUS

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any canceled claims at a later date.

1. (currently amended) A pre-mix burner for mixing combustion air with fuel to form a combustion gas mixture and subsequent combustion of the combustion gas mixture comprising:

a fuel-lean main burner adapted to receive the greater part concentration of the combustion air; and

a fuel-rich pilot burner adapted to stabilize a lean combustion in the main burner, wherein the pilot burner is a pore burner with a combustion material that has a fine-pore structure,

wherein the pre-mix burner is configured such that the combustion gas mixture flowing from the pilot burner and the combustion gas mixture flowing from the main burner merge to a common outlet having a gas lance located before the combustion material that provides a throughway for fuel to flow to the pilot burner.

2. (previously presented) The pre-mix burner in accordance with Claim 1, wherein the fine-pore structure is formed by the foaming of the combustion material.

3. (previously presented) The pre-mix burner in accordance with Claim 1, wherein the combustion material is ceramic.

4. (previously presented) The pre-mix burner in accordance with Claim 3, wherein the combustion material comprises Zirconium Oxide or Silicon Carbide.

5. (previously presented) The pre-mix burner in accordance with Claim 1, wherein the combustion material is a Nickel or Cobalt based super alloy.

6. (previously presented) The pre-mix burner in accordance with Claim 1, wherein the combustion material is a highly heat-resistant steel.

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7. (previously presented) The pre-mix burner in accordance with claim 1, further comprising: a ring channel for the combustion air of the main burner that surrounds the pilot burner.

8. (currently amended) A gas turbine, comprising:
a pre-mix burner, the pre-mix burner comprising:
a fuel lean main burner adapted to receive the greater part concentration of the combustion air; and
a fuel rich pilot burner adapted to stabilize a lean combustion in the main burner,
wherein the pilot burner is embodied as a pore burner with a combustion material that has a fine-pore structure and having a channel for assisting routing of a fuel,
wherein the pre-mix burner is configured such that the combustion gas mixture flowing from the pilot burner and the combustion gas mixture flowing from the main burner merge to a common outlet.

9. (previously presented) The gas turbine in accordance with Claim 8, further comprising a ring-shaped combustion chamber.

10. (currently amended) A method for operating a pre-mix burner, comprising:
mixing combustion air with fuel to receive a combustion gas mixture, whereby the mixing is performed by a fuel-lean main burner; and
burning the combustion gas mixture the combustion being stabilized in the main burner by a fuel-rich pilot burner, wherein a combustion reaction takes place in the pilot burner with a fine-pore combustion material and having a pilot fuel channel located upstream of the combustion material,
wherein the pre-mix burner is configured such that the combustion gas mixture flowing from the pilot burner and the combustion gas mixture flowing from the main burner merge to a common outlet.

11. (previously presented) The method in accordance with Claim 10, wherein the pre-mix burner comprises: a main burner adapted to receive the greater part of the combustion

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air; and a pilot burner adapted to stabilize a lean combustion in the main burner, wherein the pilot burner is a pore burner with a combustion material that has a fine-pore structure.

12. (previously presented) The pre-mix burner in accordance with Claim 2, wherein the combustion material is ceramic.

13. (previously presented) The pre-mix burner in accordance with Claim 2, wherein the combustion material is a Nickel or Cobalt based super alloy.

14. (previously presented) The pre-mix burner in accordance with Claim 2, wherein the combustion material is a highly heat-resistant steel.

15. (previously presented) The pre-mix burner in accordance with claim 2, further comprising: a ring channel for the combustion air of the main burner that surrounds the pilot burner.

16. (previously presented) The gas turbine in accordance with Claim 8, wherein the gas turbine is a stationary gas turbine.

17. (new) The pre-mix burner in accordance with Claim 1, further comprising a gas lance located before the combustion material that provides a secondary throughway for fuel to flow to the pilot burner.

18. (new) The gas turbine in accordance with Claim 8, further comprising a secondary channel for assisting routing of a fuel.

19. (new) The method in accordance with Claim 10, having a pilot fuel channel located upstream of the combustion material.